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Laura Robinson: *The secrets I find on the mysterious ocean floor* | TED Talk

https://www.ted.com/talks/laura_robinson_the_secret_s_i_find_on_the_mysterious_ocean_floor

Advanced Words Only

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Session 1: Word List

fossilized

adj. transformed into a fossil (= something preserved in rock for a very long period) or preserved in the form of a fossil; antiquated or inflexible

synonym: petrified, ossified, preserved

(1) obsolete **fossilized** ways, (2) a **fossilized** grove

The dinosaur bones were so old that they had been wholly **fossilized**, turning to stone over millions of years.

equator

n. an line of latitude that separates Earth's northern and southern hemispheres and has a radius of around 40,075 kilometers (24,901 miles)

(1) south of the **equator**, (2) above the **equator**

Ecuador is on the **equator**.

icecap

n. a mass of ice that permanently covers a considerable area of land, typically found in polar regions

synonym: glacier, ice sheet

(1) the shrinking **icecaps** in the Arctic, (2) receding **icecap**

The melting **icecaps** are a clear indication of climate change.

hemisphere

n. half of the terrestrial globe; half of a sphere

(1) northern **hemisphere**, (2) cerebral **hemisphere**

This weather pattern is unique to the southern **hemisphere**.

plunge

v. to dive quickly and steeply downward; to thrust or throw into something; (noun) a steep and rapid fall

synonym : dive, drop, thrust

(1) **plunge** into the water, (2) **plunge** a dagger through his heart

The company's profits **plunged** after the recall of their new product.

abyss

n. a deep, dark, or seemingly bottomless chasm or void

synonym : chasm, cavity, gulf

(1) the **abyss** of time, (2) an **abyss** of hopelessness

The deep sea is an **abyss** of mystery and discovery.

iceberg

n. a large piece of ice floating in the sea, detached from a glacier

synonym : glacier, ice mass, floe

(1) hit an **iceberg**, (2) **iceberg** melting

The ship encountered a series of **icebergs** and had to change its course.

plateau

n. an elevated, relatively level expanse of land, typically vast and extending over a large area; a state or period of little or no change following a period of growth, development, or progress

synonym : mesa, tableland, plain

(1) **plateau** region, (2) **plateau** in performance

The hikers finally reached the **plateau** after a long climb up the mountain.

seamount

n. an underwater mountain or volcano that rises from the ocean floor but does not reach the surface, often forming a peak or cone-shaped landform

synonym : seafloor mountain, submarine volcano

(1) underwater **seamount**, (2) volcanic **seamount**

Seamount chains are formed by the movement of a tectonic plate over a hotspot.

seafloor

n. the bottom of the ocean

synonym: ocean floor, benthic zone, abyssal plain

(1) **seafloor** exploration, (2) **seafloor** mapping

The oceanographer studied the **seafloor** topography to understand how it had changed over time.

taxonomy

n. the classification or scientific study of organisms, including their relationships to each other, based on shared characteristics and traits; a system of organizing and categorizing information in a particular field or subject area

synonym: classification, categorization, hierarchy

(1) **taxonomy** system, (2) biological **taxonomy**

The **taxonomy** of insects is incredibly complex due to the huge number of species.

brittle

adj. easily broken, cracked, or shattered when subjected to pressure or stress; lacking flexibility or resilience; fragile

synonym: fragile, breakable, delicate

(1) **brittle** bones, (2) **brittle** material

The old books in the library were so **brittle** that they crumbled upon touch.

tentacle

n. a flexible, mobile, and long arm-like organ used for feeling and holding things, catching food, or moving

(1) a squid's **tentacle**, (2) posterior **tentacle**

The police caught the fugitive criminal in the **tentacles** of an expanded investigation.

carbonate

n. a carbonic acid salt or ester that contains the anion CO₃

(1) sodium **carbonate**, (2) alkaline **carbonate**

The explosive chemical reaction does not occur in all sodium **carbonate**.

basalt

n. a dark, fine-grained volcanic rock that forms from the solidification of lava

synonym: volcanic rock, lava, igneous rock

(1) **basalt** rock, (2) **basalt** glass

The hiking trail was lined with towering **basalt** columns.

undersea

adj. located or occurring beneath the surface of the sea

synonym: underwater, subaquatic, marine

(1) **undersea** earthquake, (2) **undersea** habitat

The **undersea** environment is very different from the surface, with unique flora and fauna.

moor

n. a large area of open country, typically on high ground, covered with rough grass or heath, especially in Britain

synonym: heath, upland, bog

(1) low- **moor** bog, (2) **moor** the ship

The rolling **moor** was a large, open area of high ground covered with heather.

mariner

n. a sailor or seaman; someone who works or travels on a boat or ship

synonym: sailor, seafarer, navigator

(1) **mariner's** compass, (2) seasoned **mariner**

The experienced **mariner** guided the ship through treacherous waters.

scurry

v. to move hurriedly and with little or no grace, often with sudden changes in direction

synonym: hasten, rush, dart

(1) **scurry** back and forth, (2) **scurry** about aimlessly

The squirrels tried to **scurry** up the tree to avoid the dog.

seasick

adj. feeling ill or nauseous as a result of being on a ship or boat that is moving or rocking back and forth in a rough sea; suffering from motion sickness

synonym: nauseous, seasickness, queasy

(1) avoid getting **seasick**, (2) **seasick** medication

The rough waves made some passengers feel **seasick** during the boat ride.

featureless

adj. lacking distinctive qualities, characteristics, or features; plain, unremarkable, or nondescript

synonym: blank, plain, feature-free

(1) **featureless** landscape, (2) **featureless** interior

The wall was **featureless**, with no patterns or designs to break up its dullness.

sponge

n. a soft material with many microscopic pores that can absorb a large amount of liquid and is used for washing and cleaning

(1) sea **sponge**, (2) metallic **sponge**

The tiny marine **sponge** has existed for more than 500 million years.

holothurian

n. a marine animal belonging to the class Holothuroidea, commonly known as sea cucumbers, characterized by their elongated bodies and presence in various oceanic environments

synonym: sea cucumber, sea slug, marine echinoderm

(1) **holothurian** species, (2) **holothurian** habitat

The marine biologist studied the behavior of the **holothurian** in its natural habitat.

slug

n. a common name for any terrestrial gastropod mollusk that appears to lack a shell with soft and black or brown color; a bullet, a shot of alcoholic drink

(1) lazy **slug**, (2) reduce **slug** damage

I spotted a giant **slug** in the rain garden.

pyrolysis

n. a chemical reaction that occurs with the application of heat, resulting in the breakdown of material into smaller chemical components or constituents, often involving the release of gases or liquid byproducts

synonym: thermolysis, carbonization, conversion

(1) bio- **pyrolysis**, (2) **pyrolysis** plant

The **pyrolysis** of wood produces charcoal, which can be used as a fuel source.

centimeter

n. a unit of measurement of length in the metric system, equivalent to one-hundredth of a meter

(1) **centimeter** measurement, (2) thirty **centimeters** tall

The room was only one **centimeter** wider than the piano, making it a tight fit.

reconstruct

v. to build or form something again that has been damaged or destroyed

synonym: rebuild, revamp, reorganize

(1) **reconstruct** an image, (2) **reconstruct** the original text

They've decided to **reconstruct** a ruined castle.

micron

n. a unit of measurement equal to one-millionth of a meter, used for measuring the size of particles and microorganisms

synonym: micrometer

(1) **micron** measurements, (2) **micron** imaging

The width of a single human hair is around 100 **microns**.

glacial

adj. relating to or resembling a glacier (= a slowly moving mass of ice) or the process of glaciation; characterized by an extremely slow or gradual pace or movement

synonym: cold, icy, frozen

(1) **glacial** movements, (2) **glacial** terrain

The **glacial** pace of the negotiations frustrated both parties.

unpopular

adj. not liked, supported, or approved by many people; having an unfavorable reputation

synonym: disliked, unloved, unsupported

(1) **unpopular** decision, (2) an **unpopular** opinion

The politician's stance on controversial issues made him an **unpopular** candidate for many voters.

shovel

n. a tool with a handle and broad scoop or blade used for digging or moving Earth, coal, snow, or other granular materials

synonym: excavator, scoop, trowel

(1) snow **shovel**, (2) **shovel** blade

The construction workers used a power **shovel** to dig the foundation for the building.

fission

n. the splitting of an atomic nucleus into two or smaller nuclei, releasing a large amount of energy; the process of breaking something into smaller parts or pieces

synonym: splitting, division, separation

(1) heavy-ion **fission**, (2) atomic **fission**

Nuclear **fission** is the process of splitting an atom into two smaller ones.

thorium

n. a radioactive chemical element with the symbol Th and atomic number 90 that is silvery-white in color and is used as fuel in some nuclear reactors

synonym: Th, radioactive element

(1) **thorium** deposit, (2) **thorium** reactor

Certain isotopes of **thorium** are used in medicine for treating liver cancer.

turbulent

adj. marked by a lot of sudden changes, confusion, or uncertainty; characterized by intense activity or agitation

synonym: chaotic, stormy, tumultuous

(1) **turbulent** waves, (2) **turbulent** age

The stock market has been **turbulent** lately, with prices fluctuating rapidly.

Session 2: Spelling

1. tu_____nt age
adj. marked by a lot of sudden changes, confusion, or uncertainty; characterized by intense activity or agitation
2. ma_____r's compass
n. a sailor or seaman; someone who works or travels on a boat or ship
3. hit an ic_____g
n. a large piece of ice floating in the sea, detached from a glacier
4. rec_____ct the original text
v. to build or form something again that has been damaged or destroyed
5. obsolete fos_____ed ways
adj. transformed into a fossil (= something preserved in rock for a very long period) or preserved in the form of a fossil; antiquated or inflexible
6. receding ic_____p
n. a mass of ice that permanently covers a considerable area of land, typically found in polar regions
7. alkaline ca_____te
n. a carbonic acid salt or ester that contains the anion CO₃
8. pl_____u in performance
n. an elevated, relatively level expanse of land, typically vast and extending over a large area; a state or period of little or no change following a period of growth, development, or progress
9. br_____e bones
adj. easily broken, cracked, or shattered when subjected to pressure or stress; lacking flexibility or resilience; fragile

ANSWERS: 1. turbulent, 2. mariner, 3. iceberg, 4. reconstruct, 5. fossilized, 6. icecap, 7. carbonate, 8. plateau, 9. brittle

10. posterior te_____le *n.* a flexible, mobile, and long arm-like organ used for feeling and holding things, catching food, or moving
11. above the eq_____r *n.* an line of latitude that separates Earth's northern and southern hemispheres and has a radius of around 40,075 kilometers (24,901 miles)
12. py_____is plant *n.* a chemical reaction that occurs with the application of heat, resulting in the breakdown of material into smaller chemical components or constituents, often involving the release of gases or liquid byproducts
13. mi_____n measurements *n.* a unit of measurement equal to one-millionth of a meter, used for measuring the size of particles and microorganisms
14. pl_____e into the water *v.* to dive quickly and steeply downward; to thrust or throw into something; (noun) a steep and rapid fall
15. an un_____ar opinion *adj.* not liked, supported, or approved by many people; having an unfavorable reputation
16. cerebral hem_____re *n.* half of the terrestrial globe; half of a sphere
17. biological ta_____my *n.* the classification or scientific study of organisms, including their relationships to each other, based on shared characteristics and traits; a system of organizing and categorizing information in a particular field or subject area

ANSWERS: 10. tentacle, 11. equator, 12. pyrolysis, 13. micron, 14. plunge, 15. unpopular, 16. hemisphere, 17. taxonomy

18. se____k medication *adj.* feeling ill or nauseous as a result of being on a ship or boat that is moving or rocking back and forth in a rough sea; suffering from motion sickness
19. br____e material *adj.* easily broken, cracked, or shattered when subjected to pressure or stress; lacking flexibility or resilience; fragile
20. fea____ss landscape *adj.* lacking distinctive qualities, characteristics, or features; plain, unremarkable, or nondescript
21. th____m deposit *n.* a radioactive chemical element with the symbol Th and atomic number 90 that is silvery-white in color and is used as fuel in some nuclear reactors
22. un____ea habitat *adj.* located or occurring beneath the surface of the sea
23. a fos____ed grove *adj.* transformed into a fossil (= something preserved in rock for a very long period) or preserved in the form of a fossil; antiquated or inflexible
24. sc____y about aimlessly *v.* to move hurriedly and with little or no grace, often with sudden changes in direction
25. ta____my system *n.* the classification or scientific study of organisms, including their relationships to each other, based on shared characteristics and traits; a system of organizing and categorizing information in a particular field or subject area
26. a squid's te____le *n.* a flexible, mobile, and long arm-like organ used for feeling and holding things, catching food, or moving

ANSWERS: 18. seasick, 19. brittle, 20. featureless, 21. thorium, 22. undersea, 23. fossilized, 24. scurry, 25. taxonomy, 26. tentacle

27. hol_____an habitat *n.* a marine animal belonging to the class Holothuroidea, commonly known as sea cucumbers, characterized by their elongated bodies and presence in various oceanic environments
28. tu_____nt waves *adj.* marked by a lot of sudden changes, confusion, or uncertainty; characterized by intense activity or agitation
29. gl_____l movements *adj.* relating to or resembling a glacier (= a slowly moving mass of ice) or the process of glaciation; characterized by an extremely slow or gradual pace or movement
30. the shrinking ic____ps in the Arctic *n.* a mass of ice that permanently covers a considerable area of land, typically found in polar regions
31. se_____or exploration *n.* the bottom of the ocean
32. reduce s__g damage *n.* a common name for any terrestrial gastropod mollusk that appears to lack a shell with soft and black or brown color; a bullet, a shot of alcoholic drink
33. m__r the ship *n.* a large area of open country, typically on high ground, covered with rough grass or heath, especially in Britain
34. gl_____l terrain *adj.* relating to or resembling a glacier (= a slowly moving mass of ice) or the process of glaciation; characterized by an extremely slow or gradual pace or movement

ANSWERS: 27. holothurian, 28. turbulent, 29. glacial, 30. icecap, 31. seafloor, 32. slug, 33. moor, 34. glacial

35. pl___e a dagger through his heart *v.* to dive quickly and steeply downward; to thrust or throw into something; (noun) a steep and rapid fall
36. cen_____er measurement *n.* a unit of measurement of length in the metric system, equivalent to one-hundredth of a meter
37. sea sp___e *n.* a soft material with many microscopic pores that can absorb a large amount of liquid and is used for washing and cleaning
38. sc___y back and forth *v.* to move hurriedly and with little or no grace, often with sudden changes in direction
39. un_____ar decision *adj.* not liked, supported, or approved by many people; having an unfavorable reputation
40. thirty cen_____ers tall *n.* a unit of measurement of length in the metric system, equivalent to one-hundredth of a meter
41. pl___u region *n.* an elevated, relatively level expanse of land, typically vast and extending over a large area; a state or period of little or no change following a period of growth, development, or progress
42. volcanic se_____nt *n.* an underwater mountain or volcano that rises from the ocean floor but does not reach the surface, often forming a peak or cone-shaped landform
43. south of the eq____r *n.* an line of latitude that separates Earth's northern and southern hemispheres and has a radius of around 40,075 kilometers (24,901 miles)

ANSWERS: 35. plunge, 36. centimeter, 37. sponge, 38. scurry, 39. unpopular, 40. centimeter, 41. plateau, 42. seamount, 43. equator

44. hol_____an species *n.* a marine animal belonging to the class Holothuroidea, commonly known as sea cucumbers, characterized by their elongated bodies and presence in various oceanic environments
45. un_____ea earthquake *adj.* located or occurring beneath the surface of the sea
46. rec_____ct an image *v.* to build or form something again that has been damaged or destroyed
47. metallic sp____e *n.* a soft material with many microscopic pores that can absorb a large amount of liquid and is used for washing and cleaning
48. snow sh____l *n.* a tool with a handle and broad scoop or blade used for digging or moving Earth, coal, snow, or other granular materials
49. atomic fi_____n *n.* the splitting of an atomic nucleus into two or smaller nuclei, releasing a large amount of energy; the process of breaking something into smaller parts or pieces
50. underwater se_____nt *n.* an underwater mountain or volcano that rises from the ocean floor but does not reach the surface, often forming a peak or cone-shaped landform
51. sodium ca_____te *n.* a carbonic acid salt or ester that contains the anion CO₃
52. an ab__s of hopelessness *n.* a deep, dark, or seemingly bottomless chasm or void

ANSWERS: 44. holothurian, 45. undersea, 46. reconstruct, 47. sponge, 48. shovel, 49. fission, 50. seamount, 51. carbonate, 52. abyss

53. mi___n imaging *n.* a unit of measurement equal to one-millionth of a meter, used for measuring the size of particles and microorganisms
54. heavy-ion fi_____n *n.* the splitting of an atomic nucleus into two or smaller nuclei, releasing a large amount of energy; the process of breaking something into smaller parts or pieces
55. ba___t rock *n.* a dark, fine-grained volcanic rock that forms from the solidification of lava
56. avoid getting se_____k *adj.* feeling ill or nauseous as a result of being on a ship or boat that is moving or rocking back and forth in a rough sea; suffering from motion sickness
57. fea_____ss interior *adj.* lacking distinctive qualities, characteristics, or features; plain, unremarkable, or nondescript
58. th_____m reactor *n.* a radioactive chemical element with the symbol Th and atomic number 90 that is silvery-white in color and is used as fuel in some nuclear reactors
59. ic_____g melting *n.* a large piece of ice floating in the sea, detached from a glacier
60. bio-py_____is *n.* a chemical reaction that occurs with the application of heat, resulting in the breakdown of material into smaller chemical components or constituents, often involving the release of gases or liquid byproducts

ANSWERS: 53. micron, 54. fission, 55. basalt, 56. seasick, 57. featureless, 58. thorium, 59. iceberg, 60. pyrolysis

61. se____or mapping *n.* the bottom of the ocean
62. low-m__r bog *n.* a large area of open country, typically on high ground, covered with rough grass or heath, especially in Britain
63. seasoned ma_____r *n.* a sailor or seaman; someone who works or travels on a boat or ship
64. lazy s__g *n.* a common name for any terrestrial gastropod mollusk that appears to lack a shell with soft and black or brown color; a bullet, a shot of alcoholic drink
65. ba____t glass *n.* a dark, fine-grained volcanic rock that forms from the solidification of lava
66. the ab__s of time *n.* a deep, dark, or seemingly bottomless chasm or void
67. sh____l blade *n.* a tool with a handle and broad scoop or blade used for digging or moving Earth, coal, snow, or other granular materials
68. northern hem_____re *n.* half of the terrestrial globe; half of a sphere

ANSWERS: 61. seafloor, 62. moor, 63. mariner, 64. slug, 65. basalt, 66. abyss, 67. shovel, 68. hemisphere

Session 3: Fill in the Blanks

1. The dinosaur bones were so old that they had been wholly _____ turning to stone over millions of years.
adj. transformed into a fossil (= something preserved in rock for a very long period) or preserved in the form of a fossil; antiquated or inflexible
2. The tiny marine _____ has existed for more than 500 million years.
n. a soft material with many microscopic pores that can absorb a large amount of liquid and is used for washing and cleaning
3. _____ chains are formed by the movement of a tectonic plate over a hotspot.
n. an underwater mountain or volcano that rises from the ocean floor but does not reach the surface, often forming a peak or cone-shaped landform
4. The marine biologist studied the behavior of the _____ in its natural habitat.
n. a marine animal belonging to the class Holothuroidea, commonly known as sea cucumbers, characterized by their elongated bodies and presence in various oceanic environments
5. The ship encountered a series of _____ and had to change its course.
n. a large piece of ice floating in the sea, detached from a glacier
6. The rolling _____ was a large, open area of high ground covered with heather.
n. a large area of open country, typically on high ground, covered with rough grass or heath, especially in Britain
7. They've decided to _____ a ruined castle.
v. to build or form something again that has been damaged or destroyed

ANSWERS: 1. fossilized, 2. sponge, 3. Seamount, 4. holothurian, 5. icebergs, 6. moor, 7. reconstruct

8. The company's profits _____ after the recall of their new product.
v. to dive quickly and steeply downward; to thrust or throw into something; (noun) a steep and rapid fall
9. The old books in the library were so _____ that they crumbled upon touch.
adj. easily broken, cracked, or shattered when subjected to pressure or stress; lacking flexibility or resilience; fragile
10. I spotted a giant _____ in the rain garden.
n. a common name for any terrestrial gastropod mollusk that appears to lack a shell with soft and black or brown color; a bullet, a shot of alcoholic drink
11. The rough waves made some passengers feel _____ during the boat ride.
adj. feeling ill or nauseous as a result of being on a ship or boat that is moving or rocking back and forth in a rough sea; suffering from motion sickness
12. The hikers finally reached the _____ after a long climb up the mountain.
n. an elevated, relatively level expanse of land, typically vast and extending over a large area; a state or period of little or no change following a period of growth, development, or progress
13. This weather pattern is unique to the southern _____.
n. half of the terrestrial globe; half of a sphere
14. Nuclear _____ is the process of splitting an atom into two smaller ones.
n. the splitting of an atomic nucleus into two or smaller nuclei, releasing a large amount of energy; the process of breaking something into smaller parts or pieces
15. The explosive chemical reaction does not occur in all sodium _____.
n. a carbonic acid salt or ester that contains the anion CO₃

ANSWERS: 8. plunged, 9. brittle, 10. slug, 11. seasick, 12. plateau, 13. hemisphere, 14. fission, 15. carbonate

16. The politician's stance on controversial issues made him an _____ candidate for many voters.
adj. not liked, supported, or approved by many people; having an unfavorable reputation
17. The oceanographer studied the _____ topography to understand how it had changed over time.
n. the bottom of the ocean
18. The _____ pace of the negotiations frustrated both parties.
adj. relating to or resembling a glacier (= a slowly moving mass of ice) or the process of glaciation; characterized by an extremely slow or gradual pace or movement
19. The construction workers used a power _____ to dig the foundation for the building.
n. a tool with a handle and broad scoop or blade used for digging or moving Earth, coal, snow, or other granular materials
20. The _____ environment is very different from the surface, with unique flora and fauna.
adj. located or occurring beneath the surface of the sea
21. The hiking trail was lined with towering _____ columns.
n. a dark, fine-grained volcanic rock that forms from the solidification of lava
22. The police caught the fugitive criminal in the _____ of an expanded investigation.
n. a flexible, mobile, and long arm-like organ used for feeling and holding things, catching food, or moving

ANSWERS: 16. unpopular, 17. seafloor, 18. glacial, 19. shovel, 20. undersea, 21. basalt, 22. tentacles

23. The squirrels tried to _____ up the tree to avoid the dog.
v. to move hurriedly and with little or no grace, often with sudden changes in direction
24. The wall was _____ with no patterns or designs to break up its dullness.
adj. lacking distinctive qualities, characteristics, or features; plain, unremarkable, or nondescript
25. Certain isotopes of _____ are used in medicine for treating liver cancer.
n. a radioactive chemical element with the symbol Th and atomic number 90 that is silvery-white in color and is used as fuel in some nuclear reactors
26. The _____ of wood produces charcoal, which can be used as a fuel source.
n. a chemical reaction that occurs with the application of heat, resulting in the breakdown of material into smaller chemical components or constituents, often involving the release of gases or liquid byproducts
27. The experienced _____ guided the ship through treacherous waters.
n. a sailor or seaman; someone who works or travels on a boat or ship
28. The stock market has been _____ lately, with prices fluctuating rapidly.
adj. marked by a lot of sudden changes, confusion, or uncertainty; characterized by intense activity or agitation
29. The room was only one _____ wider than the piano, making it a tight fit.
n. a unit of measurement of length in the metric system, equivalent to one-hundredth of a meter
30. The width of a single human hair is around 100 _____.
n. a unit of measurement equal to one-millionth of a meter, used for measuring the size of particles and microorganisms

ANSWERS: 23. scurry, 24. featureless, 25. thorium, 26. pyrolysis, 27. mariner, 28. turbulent, 29. centimeter, 30. microns

31. The deep sea is an _____ of mystery and discovery.

n. a deep, dark, or seemingly bottomless chasm or void

32. The _____ of insects is incredibly complex due to the huge number of species.

n. the classification or scientific study of organisms, including their relationships to each other, based on shared characteristics and traits; a system of organizing and categorizing information in a particular field or subject area

33. The melting _____ are a clear indication of climate change.

n. a mass of ice that permanently covers a considerable area of land, typically found in polar regions

34. Ecuador is on the _____.

n. an line of latitude that separates Earth's northern and southern hemispheres and has a radius of around 40,075 kilometers (24,901 miles)

ANSWERS: 31. abyss, 32. taxonomy, 33. icecaps, 34. equator